



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2016-8501; Product Identifier 2014-SW-042-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Sikorsky Aircraft Corporation Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Supplemental notice of proposed rulemaking (SNPRM); reopening of comment period.

**SUMMARY:** We are revising an earlier proposal for Sikorsky Aircraft Corporation (Sikorsky) Model S-92A helicopters. This action revises the notice of proposed rulemaking (NPRM) by increasing the estimated costs of compliance and removing the daily inspection requirements. We are proposing this airworthiness directive (AD) to address the unsafe condition on these products. Since these actions would impose an additional economic burden over that proposed in the NPRM, we are reopening the comment period to allow the public the chance to comment on this change.

**DATES:** The comment period for the NPRM published in the Federal Register on July 15, 2016 (81 FR 46002), is reopened.

We must receive comments on this SNPRM by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this SNPRM, contact Sikorsky Aircraft Corporation, Customer Service Engineering, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S or 203-416-4299; email: wcs\_cust\_service\_eng.gr-sik@lmco.com. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-8501; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this SNPRM, the regulatory evaluation, any comments received, and other information. The street address for Docket Operations (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Kristopher Greer, Aviation Safety Engineer, Boston ACO Branch, Compliance and Airworthiness Division, 1200 District

Avenue, Burlington, Massachusetts 01803; telephone (781) 238-7799; email Kristopher.Greer@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2016-8501; Product Identifier 2014-SW-042-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this SNPRM. We will consider all comments received by the closing date and may amend this SNPRM because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this SNPRM.

### **Discussion**

We issued an NPRM to amend 14 CFR part 39 by adding an AD that would apply to Sikorsky Model S-92A helicopters with certain part-numbered frame assemblies installed. The NPRM published in the Federal Register on July 15, 2016 (81 FR 46002). The NPRM was prompted by fatigue analysis indicating the possible development of stress concentrations at the steel doublers on the main transmission airframe support structure top deck, as well as the discovery of a helicopter with a crack in the STA 362 frame and skin. The NPRM proposed to require inspecting the main transmission forward

and aft frame assemblies and adjacent skins for a crack and loose fasteners and replacing or repairing any cracked part or loose fastener. The NPRM also proposed to require establishing life limits for certain frame assemblies. The proposed requirements were intended to detect a crack in a frame assembly and prevent failure of a frame and subsequent loss of control of the helicopter.

### **Actions Since the NPRM was Issued**

Since we issued the NPRM, we have revised the number of work-hours to replace the aircraft frames based upon the comments we received. This resulted in an overall increase in the cost of complying with the proposed AD. Since the economic burden is higher than that in the NPRM, we are reopening the comment period to allow the public the chance to comment on this new estimate.

### **Comments**

We gave the public the opportunity to comment on the NPRM. After our NPRM was published, we received the following comments from Sikorsky.

### **Request to Require Modification of the Frame Assembly**

Sikorsky requested that the AD require altering the transmission support frames in accordance with Sikorsky S-92 Alert Service Bulletin 92-53-012, Basic Issue, dated February 10, 2014 (ASB 92-53-012), and Sikorsky Special Service Instructions No. 92-074-E, Revision E, dated April 9, 2014 (SSI 92-074-E). In support of its request, Sikorsky stated this modification largely improves the fatigue capability of the transmission support frames. Sikorsky also requested updating language in the preamble to reflect requiring the modification.

We disagree. We determined that the alterations to the transmission support frames are not required to correct the unsafe condition.

#### **Request to Remove the Daily Inspection**

Sikorsky requested that we remove the daily repetitive inspection requirement from the proposed AD. In support of this request, Sikorsky stated that the proposed AD's requirement to perform this same inspection every 150 hours time-in-service (TIS) would maintain the safety of the aircraft. Sikorsky further stated structural analysis reports substantiate the 150-hour inspection interval.

We agree that the daily inspection requirement is not necessary to maintain the fleet's airworthiness. After reviewing data from Sikorsky's organization designation authorization supporting its life limit and continuing airworthiness projects, we determined that repeating the inspections every 150 hours would be adequate to detect and prevent an unsafe condition.

#### **Request that the AD Reference the Maintenance Manual**

Sikorsky requested that the proposed AD reference the main transmission support structure inspection task in the Sikorsky maintenance manual for the 150-hour repetitive inspection. In support of this request, Sikorsky stated this task provides a complete, detailed procedure for the inspection requirements.

We agree. We have revised the proposed AD to reference the task card as guidance for the 150-hour inspection.

### **Request to Delay Issuance of the Proposed AD**

Sikorsky requested that we delay issuing this proposed AD until after Sikorsky completes a project to increase the life limits of the forward STA 382 and aft STA 362 frame assemblies.

We disagree. Because this unsafe condition could exist or develop on Sikorsky Model S-92A helicopters, the proposed actions are necessary to ensure safety of the U.S. fleet. Issuance of an AD is the appropriate method to correct the unsafe condition. Should completion of Sikorsky's certification project result in a corrective action that removes the unsafe condition, we might consider further rulemaking action.

### **Request to Correct Part Numbers**

Sikorsky requested that we correct two part numbers in Table 4 of the Required Actions. Specifically, Sikorsky stated part number "92070-02108-042" should be "92209-02108-042" and part number "92080-02108-103" should be "92209-02108-103."

We agree. We have revised the table accordingly.

### **Request to Add Serial Numbers to the Applicability**

Sikorsky requested that the proposed life limits only apply to helicopters with serial numbers 920006 through 920243. In support of this request, Sikorsky advised that starting with serial number 920244, helicopters were manufactured with an upgraded titanium frame configuration that is not affected by the proposed AD.

We disagree. While production helicopters starting with serial number 920244 may not currently have the parts that are subject to the unsafe condition installed, operators are not required to maintain that configuration. Omitting the serial numbers

allows the proposed AD to apply to any Model S-92A helicopter if a frame subject to the unsafe condition is later installed.

#### **Request to Clarify Language Regarding Life Limit of Altered Parts**

Sikorsky requested that we clarify the wording of the 28,500-hour life limit for parts that are altered and changed to a new part number. Specifically, Sikorsky requested that we change “28,500 hours TIS total (regardless of P/N)” to “28,500 hours TIS total from the original frame part number initial service date.”

We disagree. The language in the proposed AD clearly states that this life limit applies regardless of whether the frame assembly part number changes.

#### **Request to Revise the Compliance Cost**

Sikorsky requested that we revise the estimated costs of complying with the proposed AD. Specifically, Sikorsky advised that the number of hours to replace a frame has increased from 3,360 to 5,000, while the number of affected helicopters on the U.S. registry has decreased from 80 to 50.

We agree. We have revised the Costs of Compliance section accordingly.

#### **Request to Revise SUMMARY**

Sikorsky requested that we change the last sentence in SUMMARY, which identifies the unsafe condition, to be consistent with the language in the Unsafe Condition paragraph.

We agree that Sikorsky’s proposal provides more consistency. However, due to Administrative Committee of the Federal Register publishing requirements, the specific unsafe condition is no longer stated in SUMMARY. Thus, no change to this SNPRM is necessary.

**Request to Update Contact Information**

Sikorsky requested that we update the email address for its Customer Service Engineering in both the preamble and the proposed AD.

We agree and have made the requested changes.

**Request to Clarify the Related Service Information Section**

Sikorsky requested that we revise the language in the Related Service Information section describing the actions in ASB 92-53-012 and SSI 92-074-E. Specifically, Sikorsky requests that we change “replacing the fasteners” to “removing steel doublers, cold-working holes, oversizing holes, trimming skin panels and reassembly with interference fit fasteners.” In support, Sikorsky stated the recommended language would provide clarification.

We agree. We have made the requested changes accordingly.

**Request to Clarify the Differences section**

Sikorsky requested that we clarify the Differences Between This Proposed AD and the Service Information section. Specifically, Sikorsky recommended adding “by this AD” to the sentence: “Contacting Sikorsky would not be required.”

We agree. We have revised the proposed AD accordingly.

**Related Service Information**

Sikorsky issued S-92 Alert Service Bulletin (ASB) 92-53-008, Basic Issue, dated June 13, 2012 (ASB 92-53-008); S-92 ASB 92-53-009, Basic Issue, dated December 6, 2012 (ASB 92-53-009); and ASB 92-53-012. ASB 92-53-008 provides procedures for a one-time inspection of the main transmission frames and beams for a crack, missing or loose fastener or collar, damage, deformation, and corrosion. ASB 92-53-009 specifies an



inspection before the first flight of the day and a recurring 150-hour inspection of the interior and exterior surfaces of the upper flanges and beams. ASB 92-53-012 specifies altering the forward and aft transmission support frames by removing steel doublers, cold-working the holes, oversizing the holes, trimming skin panels and reassembling the parts with interference fit fasteners in accordance with SSI 92-074-E. After this alteration, the parts are re-identified with a new part number. Sikorsky refers to this alteration as a service life extension program modification.

### **FAA's Determination**

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of these same type designs. Certain changes described above expand the scope of the NPRM. As a result, we have determined that it is necessary to reopen the comment period to provide additional opportunity for the public to comment on this SNPRM.

### **Proposed Requirements of this SNPRM**

This SNPRM would establish a life limit for certain part-numbered frame assemblies by removing from service any part that has reached or exceeded its new life limit. Frame assemblies that are altered under Sikorsky's service life extension program and re-identified with a new part number must be removed from service upon accumulating the life limit of the old part-number or within certain hours TIS since the alteration, whichever occurs first.

This SNPRM also would require, within 150 hours TIS and thereafter at intervals not to exceed 150 hours TIS, inspecting STA 328 frame and STA 362 frame for a crack

or loose fasteners. If there is a crack or loose fastener, this SNPRM would require repairing or replacing any cracked part and any loose fastener before further flight.

### **Differences Between this SNPRM and the Service Information**

The service information requires providing certain information to Sikorsky, and this proposed AD would not. The service information specifies performing a fluorescent penetrant inspection if there is a suspected crack and contacting Sikorsky if there is a crack, while this proposed AD would only require repairing or replacing any cracked part. Contacting Sikorsky would not be required by this proposed AD.

### **Costs of Compliance**

We estimate that this proposed AD would affect 50 helicopters of U.S. Registry. We estimate that operators may incur the following costs to comply with this proposed AD. Labor costs are estimated at \$85 per work-hour. We estimate a minimal cost to establish and revise the life limit of the frame assembly. We estimate it would take 1 work-hour to inspect STA 328 and 362 frames. No parts would be needed for a total cost of \$4,250 for the fleet for each inspection per inspection cycle. If a fastener is replaced, we estimate the cost to be minimal. If a frame is replaced, it would take 5,000 work-hours and required parts would cost \$296,000 for a total cost of \$721,000 per helicopter.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs" describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

## **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**Sikorsky Aircraft Corporation Helicopters:** Docket No. FAA-2016-8501; Product Identifier 2014-SW-042-AD.

#### **(a) Applicability**

This AD applies to Model S-92A helicopters, certificated in any category, with a forward station (STA) 328 or aft STA 362 frame assembly with a part number (P/N) as shown in Table 1 to paragraph (e)(1), Table 2 to paragraph (e)(1), Table 3 to paragraph (e)(2), or Table 4 to paragraph (e)(2) of this AD.

#### **(b) Unsafe Condition**

This AD defines the unsafe condition as a crack in a main transmission airframe support structure. This condition could result in failure of a main transmission frame and subsequent loss of control of the helicopter.

#### **(c) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(d) Compliance**

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

**(e) Required Actions**

(1) For helicopters with a frame assembly with a P/N shown in Table 1 to paragraph (e)(1) or Table 2 to paragraph (e)(1) of this AD, before further flight, remove from service any part that has reached or exceeded its new life limit. Forward STA 328 frame assemblies that are altered and changed to P/N 92070-20124-064, 92070-20124-067, 92070-20127-045, 92070-20124-065, 92070-20124-047, or 92070-20127-046 must be removed from service upon accumulating 12,000 hours TIS from the alteration or 28,500 hours TIS total (regardless of P/N) from the total original frame part number initial service date, whichever occurs first.

<b>Forward STA 328 Frame Assembly P/N</b>	<b>Life Limit Hours TIS</b>
92070-20124-064	12,000
92070-20124-067	12,000
92070-20127-045	12,000
92070-20124-065	12,000
92070-20124-047	12,000
92070-20127-046	12,000
92070-20124-063	12,000
92070-20124-066	12,000
92070-20127-041	12,000

<b>Aft STA 362 Frame Assembly P/N</b>	<b>Life Limit Hours TIS</b>
92070-20124-041	10,400
92070-20124-044	10,400
92070-20127-042	10,400
92070-20124-042	10,400
92070-20124-045	10,400
92070-20127-049	10,400
92070-20124-043	10,400
92070-20124-046	10,400
92070-20127-050	10,400
92070-20141-050	17,000
92070-20141-051	17,000
92070-20141-052	17,000

Table 1 to Paragraph (e)(1)

<b>Forward STA 328 Frame Assembly P/N</b>	<b>Life Limit Hours TIS</b>
92070-20097-058	28,500
92080-20047-047	28,500
92070-20097-060	28,500
92080-20047-048	28,500

Table 2 to Paragraph (e)(1)

(2) For each frame assembly listed in Table 1 to paragraph (e)(1) or Table 4 to paragraph (e)(2) of this AD with 1,801 or more hours TIS, and for each frame assembly listed in Table 2 to paragraph (e)(1) or Table 3 to paragraph (e)(2) of this AD with 1,301 or more hours TIS, within 150 hours TIS and thereafter at intervals not to exceed 150 hours TIS, do the following inspections. For guidance on performing these inspections, refer to Sikorsky S-92A-AMM-000 Maintenance Manual Chapter 53-20-00, Task 53-20-00-210-003, dated January 31, 2018:

(i) Inspect the STA 328 frame and STA 362 frame between the left and right butt line (BL) 16.5 beams and inspect the area on the left and right BL 16.5 beams six inches on either side of the mounting pads for a crack and loose fasteners. If there is a loose fastener or a crack, repair or replace any cracked part and any loose fastener before further flight.

(ii) Inspect the STA 328 and STA 362 outboard frames, left and right sides, from the BL 16.5 beam to water line 252.25 for a crack and loose fasteners. If there is a loose fastener or a crack, repair or replace any cracked part and any loose fastener before further flight.

<b>Forward STA 328 Frame Assembly P/N</b>	<b>Aft STA 362 Frame Assembly P/N</b>
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92209-02106-042	92070-20097-062
92209-02106-043	92080-20047-051
92070-20097-041	92209-02109-043
92080-20047-041	92209-02109-044
	92070-20097-042
	92080-20047-042
	92070-20097-064
	92080-20047-052

Table 3 to Paragraph (e)(2)

<b>Fwd STA 328 Frame Assembly P/N</b>	<b>Aft STA 362 Frame Assembly P/N</b>
92209-02107-042	92209-02108-042
92209-02107-103	92209-02108-103

Table 4 to Paragraph (e)(2)

**(f) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Boston ACO Branch, FAA, may approve AMOCs for this AD. Send your proposal to: Kristopher Greer, Aviation Safety Engineer, Boston ACO Branch, Compliance and Airworthiness Division, 1200 District Avenue, Burlington, Massachusetts 01803; telephone (781) 238-7799; email Kristopher.Greer@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office before operating any aircraft complying with this AD through an AMOC.

**(g) Additional Information**

Sikorsky S-92 Alert Service Bulletin (ASB) 92-53-008, Basic Issue, dated June 13, 2012; ASB 92-53-009, Basic Issue, dated December 6, 2012; ASB 92-53-012, Basic Issue, dated February 10, 2014, and Sikorsky Special Service Instructions

No. 92-074-E, Revision E, dated April 9, 2014, and Sikorsky S-92A-AMM-000 Maintenance Manual, Chapter 53-20-00, Task 53-20-210-003, dated January 31, 2018, which are not incorporated by reference, contain additional information about the subject of this AD. For service information identified in this AD, contact Sikorsky Aircraft Corporation, Customer Service Engineering, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S or 203-416-4299; email [wcs\\_cust\\_service\\_eng.gr-sik@lmco.com](mailto:wcs_cust_service_eng.gr-sik@lmco.com). You may view this information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

**(h) Subject**

Joint Aircraft System Component (JASC) Code: 5311 Fuselage Main, Frame.

Issued in Fort Worth, Texas, on December 13, 2018.

Lance T. Gant,

Director, Compliance & Airworthiness Division,  
Aircraft Certification Service.

[FR Doc. 2018-27713 Filed: 12/21/2018 8:45 am; Publication Date: 12/26/2018]